

REMARKS

In the Office Action, the Examiner rejected claims 1, 4–8, and 10–12 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 4,185,168 ("*Graupe*") in view of IBM Technical, Recording or Broadcasting Automatic Gain Control Compressor ("*IBM*"). The Examiner also rejected claims 2 and 9 under 35 U.S.C. § 103(a) as unpatentable over *Graupe* as modified by *IBM* and further in view of U.S. Patent 5,170,437 ("*Strahm*"), and rejected claim 3 under § 103(a) as unpatentable over *Graupe* as modified by *IBM* and further in view of U.S. Patent 5,253,299 ("*Ishida*"). Applicant respectfully traverses the rejection of these claims because the Examiner fails to make a *prima facie* case for obviousness.

Amendment

Applicant has amended claims 1, 5, 8, and 12 to more clearly recite the subject matter of Applicant's invention. Applicant has deleted "that has not been adjusted by said adjusting device yet" from claims 1 and 8. Applicant has added the word "and" to claims 5 and 12. No new matter has been added.

Rejection under § 103(a)

To establish a *prima facie* case of obviousness under §103(a), each of three requirements must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine references or modify a reference. (See MPEP § 2143.) Second, a reasonable expectation of success must exist that the proposed modification will work for the intended purpose. (See *id.*) Moreover, both of these requirements must "be found in the prior art, not in applicant's disclosure." (*Id.*) Third, the reference

or references, taken alone or in combination, must disclose or suggest every element recited in the claims. (See MPEP §2143.03.)

Claim 1 recites, *inter alia*:

An apparatus for reducing a noise component contained in an input signal, comprising: . . .

an adjusting device for adjusting a level of said input signal so as to make said level of said noise component equal to or lower than a predetermined threshold level;

a restoring device for restoring a level of said adjusted input signal to said level of said input signal.

The Examiner acknowledges that “*Graupe* fails to teach a restoring device for restoring a level of said adjusted input signal to [said] level of said input signal that has not been adjusted by said adjusting device yet.” (Paper No. 16, at 3.) But the Examiner alleges that *IBM* compensates for this deficiency and that “it would have been obvious to one of ordinary skill in the art to utilize the teaching of *IBM* into *Graupe* to provide automatic gain control ACC circuitry to have quality audio signal.” (*Id.*)

Applicant respectfully disagrees. The *IBM* publication discloses an automatic gain control compressor. (*IBM*, p. 2, ¶ 1.) The compressor attenuates an input signal, which was recorded at a constant volume high enough to mask all background noise, in order to output a compressed signal, and the compressor creates an AGC signal. (*Id.*, p. 2, ¶ 2.) When playing back the signal, the AGC signal controls an expander, which converts the compressed signal back to the original signal. (*Id.*) That is, *IBM* discloses compressing and decompressing data, which was recorded at a level to mask background noise and which has no noise component to make equal to or lower than a predetermined threshold level.

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By contrast, claim 1 recites, "a restoring device for restoring a *level of said adjusted input signal* to said level of said input signal." The adjusted input signal is generated by adjusting a level of the input signal so as to make the level of the noise component equal to or lower than a predetermined threshold level. *IBM*, instead, discloses decompressing data, which was recorded at a level to mask background noise and which has no noise component to make equal to or lower than a predetermined threshold level. Consequently, *IBM* neither suggests nor discloses "a restoring device for restoring a *level of said adjusted input signal*," as recited in claim 1.

Further, *IBM* specifically requires that the compressed signal be recorded at a level to mask any background noise, which teaches away from modifying the reference even to suggest "a restoring device for restoring a *level of said adjusted input signal*," as recited in claim 1.

Because *Graupe* fails to disclose or suggest at least "a restoring device for restoring a *level of said adjusted input signal* to said level of said input signal" and *IBM* fails to compensate for this deficiency, combination of the references cannot render claim 1 obvious. In addition, because the references fail to disclose or suggest each element recited in claim 1, there can be no expectation of achieving the claimed invention. Further, because *IBM* addresses compressing and decompressing data, which has no disclosed background noise, Applicant submits that there is no motivation to combine the references.

Because each element required for a prima facie case for obviousness is lacking, Applicant respectfully submits that claim 1 is allowable over the references and requests

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withdrawal of the rejection. Similarly, claims 4–7 are likewise allowable over the cited references at least because of their dependence from claim 1.

The Examiner rejected claim 2 under § 103(a) as unpatentable over *Graupe* as modified by *IBM* and in view of *Strahm*. *Strahm* discloses an audio signal energy level detector. *Strahm* fails to disclose, however, “a restoring device for restoring a level of said adjusted input signal to said level of said input signal,” as recited in claim 1, from which claim 2 depends. Thus, *Strahm* fails to compensate for the deficiencies of *Graupe* and *IBM*. Thus, combination of the references cannot render the claim obvious. Withdrawal of the rejection is respectfully requested.

The Examiner also rejected claim 3 under § 103(a) as unpatentable over *Graupe* as modified by *IBM* and in view of *Ishida*. *Ishida* discloses a noise reduction apparatus, but fails to disclose, “a restoring device for restoring a level of said adjusted input signal to said level of said input signal,” as recited in claim 1, from which claim 3 depends. Thus, *Ishida* fails to compensate for the deficiencies of *Graupe* and *IBM* and this combination of references cannot render the claim obvious. Withdrawal of the rejection is respectfully requested.

The Examiner also rejected claim 8 under § 103(a) as obvious over *Graupe* in view of *IBM*, stating, “As to claims 8, 10-12, these are the mthode claims of claims 1, and 3-5, respectively. Thus not claims 1, and 3-5, respectively, for rejections.” (Paper No. 16, at 4.) Without agreeing with the Examiner’s characterization of claims 8 and 10–12, the Examiner acknowledged “*Graupe* fails to teach a restoring device for restoring a level of said adjusted input signal to [said] level of said input signal that has not been adjusted by said adjusting device yet.” (Paper No. 16, at 3.) But the Examiner

alleged that *IBM* compensates for that deficiency. (*Id.*) For the reasons given above with respect to claim 1, *IBM* also fails to disclose or suggest "restoring a level of said adjusted input signal to said level of said input signal," as recited in claim 8.

As *Graupe* and *IBM* fail to disclose or suggest each and every element recited in claim 8, Applicant respectfully requests withdrawal of the rejection. Claims 10–12 are likewise allowable over *Graupe* at least because of their dependence from claim 8.

The Examiner also rejected claim 9 under § 103(a) as unpatentable over *Graupe* in view of *IBM* and further in view of *Strahm*. As noted above with respect to claim 2, *Strahm* discloses an audio signal energy level detector but fails to disclose, "restoring a level of said adjusted input signal to said level of said input signal," as recited in claim 8, from which claim 9 depends. Thus, *Strahm* fails to compensate for the deficiencies of *Graupe* and *IBM* and this combination of references cannot render the claim obvious. Withdrawal of the rejection is respectfully requested.


In view of the foregoing amendments and remarks, Applicant respectfully requests the reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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